

Atty. Docket No. OSU1159-159A Serial No. 10/040,036

Dutta et al.

Applicant

Group Art Unit

Examiner's name

U.S. PATENT DOCUMENTS

Examiner's Initial	Document Number	Date	Name	Class/Sub-class
U	5,705,129	01/06/1998	Takahashi et al.	422/90
U	6,062,064	05/16/2000	Yoshida et al.	73/23.2

FOREIGN PATENT DOCUMENTS

Examiner's Initial	Document Number	Date	Country/Name	Translation? yes/no
	NONE			

OTHER DOCUMENTS

1. N. Miura, G. Lu and N. Yamazoe, *High-temperature potentiometric/amperometric NO_x sensors combining stabilized zirconia with mixed-metal oxide electrode*, *Sensors and Actuators B*, 52 (1998) 169- 178.
2. N. Miura, H. Kurosawa, M. Hasei, G. Lu and N. Yamazoe, *Stabilized zirconia-based sensor using oxide electrode for detection of NO_x in high-temperature combustion-exhausts*, *Solid State Ionics*, 86-88 (1996) 1069-1073.

3. N. Miura, G. Lu, N. Yamazoe, H. Kurosawa and M. Hasei, *Mixed Potential Type NO_x Sensor Based on Stabilized Zirconia and Oxide Electrode*, *J. Electrochem. Soc.* 143 (2) (1996) L33 – L35.
4. G. Lu, N. Miura and N. Yamazoe, *Stabilized zirconia-based sensors using WO₃ electrode for detection of NO or NO₂*, *Sensors and Actuators B*, 65 (2000) 125 – 127.
5. H. Kurosawa, Y. Yan, N. Miura and N. Yamazoe, *Stabilized zirconia-based NO_x sensor operative at high temperature*, *Solid State Ionics*, 79 (1995) 338-343.
6. E.L. Brosha, R. Mukundan, D.R. Brown, F.H. Garzon, J.H. Visser, M. Zanini, Z. Zhou and E.M. Logothetis, *CO/H₂C sensors based on thin films of LaCoO₃ and La_{0.8}Sr_{0.2}CoO_{3-δ} metal oxides*, *Sensors and Actuators B*, 69 (2000) 171-182.
7. R. Mukundan, E.L. Brosha, D.R. Brown and F.H. Garzon, *Ceria-Electrolyte-Based Mixed Potential Sensors for the Detection of Hydrocarbons and Carbon Monoxide*, *Electrochemical and Solid State Letters*, 2(8) (1999) 412-414.
8. R. Mukundan, E.L. Brosha, D.R. Brown and F.H. Garzon, *A Mixed-Potential Sensor Based on a Ce_{0.8}Gd_{0.2}O_{1.9} Electrolyte and Platinum and Gold Electrodes*, *J. Electrochem. Soc.* 147 (4) (2000) 1583-1588.
9. T. Hibino, S. Kakimoto and M. Sano, *Non-Nernstian Behavior at Modified Au Electrodes for Hydrocarbon Gas Sensing*, *J. Electrochem. Soc.* 146 (9) (1999) 3361-3366.
10. A. Walcarius, *Zeolite-Modified Electrodes in Electroanalytical Chemistry*, *Analytical Chimica Acta*, 384, pp. 1 – 16 (1999).
11. A. Walcarius, *Factors Affecting the Analytical Applications of Zeolite Modified Electrodes: Indirect Detection of Nonelectroactive Cations*, *Analytical Chimica Acta*, 388, pp. 79-91 (1999).
12. K. Fukui, S. Nishida, *CO Gas Sensor Based on Au-La₂O₃ Added SnO₂ Ceramics with Siliceous Zeolite Coat*, *Sensors and Actuators B*, 45, pp. 101 – 106 (1997).
13. H. Tsuchiya, I. Sasaki, A. Harano, T. Okubo and M. Sadakata, *Zeolite Sensor for Nitrogen Monoxide Detection at High Temperature*, *Mat. Res. Soc. Symp. Proc.*, 454, pp. 297-302 (1997).
14. O. Ene, *Morphological and Electrocatalytic Properties of Gold Deposits on NaY Zeolite*, *Electrochim. Acta.*, pp. 1647-1654 (1989).

15. M. Osada, I. Sasaki, M. Nishioka, M. Sadakata, T. Okubo, *Synthesis of a Faujasite Thin Layer and its Application for SO₂ Sensing at Elevated Temperatures*, *Microporous and Mesoporous Materials*, 23, pp. 287 – 294 (1998).

16. B. Liu, F. Yang, J. Kong, J. Deng, *A Reagentless Amperometric Biosensor Based on the Coimmobilization of Horseradish Peroxidase and Methylene Green in a Modified Zeolite Matrix*, *Analytica Chimica Acta*, 386, pp. 31- 39 (1999).

17. U. Kunzellman, H. Bottche, *Biosensor Properties of Glucose Oxidase Immobilized Within SiO₂ Gels*, *Sensors and Actuators B*, 39, pp. 222 – 228 (1997).

18. U. Simon, U. Flesch, W. Maunz, R. Muller, C. Plog, *The effect of NH₃ on the Ionic Conductivity of Dehydrated Zeolites Nabeta and Hbeta*, *Microporous and Mesoporous Materials*, 21, pp. 111-116 (1998).

19. O.S. Wolfbeis, *Novel Oxygen Sensor Material Based on a Ruthenium Bipyridyl Complex Encapsulated in Zeolite Y: Dramatic Differences in the Efficiency of Luminescence Quenching by Oxygen on Going From Surface-Absorbed to Zeolite-Encapsulated Fluorophores*, *Sensors and Actuators B*, 29, pp. 240 – 245 (1995).

20. R. Berger, Ch. Gerber, H.P. Lang, J.K. Gimzewski, *Micromechanics: A Toolbox for Femtoscale Science: Towards a Laboratory on a Tip*, *Microelectronic Engineering*, 35, pp. 373-379 (1997).

21. L. Scandella, G. Binder, T. Mezzacasa, J. Gobrecht, R. Berger, H.P. Lang, Ch. Gerber, J.K. Gimzewski, J.H. Koegler, J.C. Jansen, *Combination of Single Crystal Zeolites and Microfabrication: Two Applications Toward Zeolite Nanodevices*, *Microporous and Mesoporous Materials*, 21, pp. 403 – 409 (1998).

Examiner

Date Considered

7/03

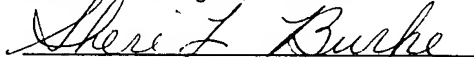
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

The identification of any document herein is not intended to be, and should not be understood as being, an admission that each such document, in fact, constitutes "prior art" within the meaning of applicable law since, for example, a given document may have a later effective date than at first seems apparent or the document may have an effective date which can be antedated. The "prior art" status of any document is a matter to be resolved during prosecution.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8 (A)

Date of Deposit: February 4, 2002

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231.


Sheri L. Burke

4. Zhuiykov, S. et al., *Potentiometric NO_x Sensor Based on Stabilized Zirconia and NiCr₂O₄ Sensing Electrode Operating High Temperatures*, *Electrochemistry Communications* 3, 97-101 (2001).
5. Miura, N. et al., *Selective Detection of NO by Using an Amperometric Sensor Based on Stabilized Zirconia and Oxide Electrode*, *Solid State Ionics* 117, 283-290 (1999).
6. Sberveglieri, G., et al., *Response to Nitric Oxide of Thin and Thick SnO₂ Films Containing Trivalent Additives*, *Sensors and Actuators B1*, 79-82 (1990).
7. Baratto, C. et al., *Gold-Catalysed Porous Silicon for NO_x Sensing*, *Sensors and Actuators B* 68, 74-80 (2000).
8. Fruhberger, B. et al., *Detection and Quantification of Nitric Oxide in Human Breath Using a Semiconducting Oxide Based Chemiresistive Microsensor*, *Sensors and Actuators B* 76, 226-234 (2001).
9. Ono, M. et al., *Amperometric Based on NASICON and NO Oxidation Catalysts for Detection of Total NO_x in Atmospheric Environment*, *Solid State Ionics* 136-137, 583-588 (2000).
10. Fleischer, M. et al., *Selective Gas Detection with High-Temperature Operated Metal Oxides Using Catalytic Filters*, *Sensors and Actuators B* 69, 205-210 (2000).
11. Kitsukawa, S. et al., *The Interference Elimination for Gas Sensor by Catalyst Filters*, *Sensors and Actuators B* 65, 120-121 (2000).
12. Fukui, K. et al., *CO Gas Sensor Based on Au-La₂O₃ Added SnO₂ Ceramics with Siliceous Zeolite Coat*, *Sensors and Actuators B* 45, 101-106, (1997).
13. Hugon, O. et al., *Gas Separation with a Zeolite Filter, Application to the Selectivity Enhancement of Chemical Sensors*, *Sensors and Actuators B* 67, 235-243 (2000).
14. Kaneyasu, K. et al., *A Carbon Dioxide Gas Sensor Based on Solid Electrolyte for Air Quality Control*, *Sensors and Actuators B* 66, 56-58 (2000).
15. Szabo, N. et al., *Microporous Zeolite Modified yttria Stabilized Zirconia (YSZ) Sensors for Nitric Oxide (NO) Determination in Harsh Environments*, *Sensors and Actuators B* 41/42, 1-8 (2001).

Examiner	Date Considered
----------	-----------------

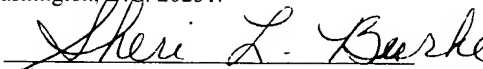
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

The identification of any document herein is not intended to be, and should not be understood as being, an admission that each such document, in fact, constitutes "prior art" within the meaning of applicable law since, for example, a given document may have a later effective date than at first seems apparent or the document may have an effective date which can be antedated. The "prior art" status of any document is a matter to be resolved during prosecution.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8 (A)

Date of Deposit: May 21, 2002

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231.


Sheri L. Burke